

DIVISION OF STRUCTURES AND ENGINEERING SERVICES  
TRANSPORTATION LABORATORY  
RESEARCH REPORT

**A Study of Vacuum Extractor,  
Vacuum Pycnometer, And Nuclear Procedures  
For Determining Asphalt Content  
In Asphalt Concrete**

FINAL REPORT

FHWA-CA-TL-3127-77-05

JUNE 1977

Prepared in Cooperation with the U.S. Department of Transportation,  
Federal Highway Administration





1. REPORT NO. FHWA-CA-TL-3127-77-05		2. GOVERNMENT ACCESSION NO.		3. RECIPIENT'S CATALOG NO.	
4. TITLE AND SUBTITLE A STUDY OF VACUUM EXTRACTOR, VACUUM PYCNOMETER, AND NUCLEAR PROCEDURES FOR DETERMINING ASPHALT CONTENT IN ASPHALT CONCRETE				5. REPORT DATE June 1977	
				6. PERFORMING ORGANIZATION CODE	
7. AUTHOR(S) T. Scrimsher				8. PERFORMING ORGANIZATION REPORT NO. 19301-633127	
9. PERFORMING ORGANIZATION NAME AND ADDRESS Office of Transportation Laboratory California Department of Transportation Sacramento, California 95819				10. WORK UNIT NO.	
				11. CONTRACT OR GRANT NO. D-3-52	
12. SPONSORING AGENCY NAME AND ADDRESS California Department of Transportation Sacramento, California 95807				13. TYPE OF REPORT & PERIOD COVERED Final	
				14. SPONSORING AGENCY CODE	
15. SUPPLEMENTARY NOTES This report was prepared in cooperation with the U.S. Department of Transportation, Federal Highway Administration.					
16. ABSTRACT  This report documents a study of three test procedures used to determine the asphalt content of bituminous mixes. The primary equipment used for the three procedures were a vacuum extractor, a vacuum pycnometer (Yale), and a Troxler Nuclear Asphalt Content Gage (Model 2226). The test equipment, accuracy, cost, and repeatability are discussed for each procedure and recommendations regarding procedure selection are presented.					
17. KEY WORDS Asphalt extraction, vacuum extrac- tion, nuclear asphalt content gage (Troxler), vacuum pycnometer (Yale), bituminous extraction.			18. DISTRIBUTION STATEMENT No restrictions. This document is available to the public through the National Technical Information Service, Springfield, VA 22161.		
19. SECURITY CLASSIF. (OF THIS REPORT) Unclassified		20. SECURITY CLASSIF. (OF THIS PAGE) Unclassified		21. NO. OF PAGES 97	
				22. PRICE	